

## In the Claims

Claims 1-34 (canceled)

Claim 35 (currently amended) A battery charging system, comprising:

a current source;  
a plurality of batteries connected in series;  
said current source in series with said batteries; ~~and~~  
a plurality of voltage and current regulators, each said voltage and current regulator connected across a respective one of said batteries, each said voltage and current regulator regulating voltage applied to said respective battery and current supplied to said respective battery, each of said voltage and current regulators also being connected in series- and comprising an adjustable band-gap voltage reference diode in series with a resistor, said series resistor and said band-gap voltage reference diode connected across said respective battery, said adjustable band-gap voltage reference diode having a reference input; a voltage divider potentiometer connected across said respective battery, said voltage divider potentiometer having an output connected to said reference input of said adjustable band-gap voltage reference diode, and providing a reference input voltage at said reference input to said band-gap voltage reference diode; and  
a transistor having an emitter and a collector connected across said respective battery, said transistor having a base connected to a junction between said series connected resistor and said band-gap voltage reference diode, said band-gap reference diode, said series resistor, and said transistor operating in conjunction with one another to regulate voltage applied to said respective battery and current supplied to said respective battery.

Claim 36 (cancelled)

Claim 37 (original) The battery charging system according to claim 35, wherein further said battery charging system has a switch in series with said current source to control current supplied to said batteries by switching said current source on or off.

Claim 38 (currently amended) The battery charging system according to claim ~~37~~ 35, wherein said switch is timer controlled.

Claim 39 (currently amended) The battery charging system according to claim ~~38~~ 35, wherein said timer controlled switch is a microcontroller.

Claim 40 (original) The battery charging system according to claim 35, wherein further said battery charging system has means for incorporating at least one additional reference input voltage at said reference input to said band-gap voltage reference diode.

Claim 41 (original) The battery charging system according to claim 35, wherein further each said voltage and current regulator is programmable.

Claim 42 (cancelled)